

Agency for Health Care Administration

Florida Center for Health Information

And Policy Analysis

November 2009

Title:

Adverse Events in Florida Ambulatory Surgery Centers for FY07-08

Summary:

The Florida Agency for Health Care Administration (Agency) has prepared a report on Adverse Events occurring in Ambulatory Surgery Centers (ASC) in Florida. The Agency's Risk Management and Patient Safety Program identifies and tracks incidents that result in patient injury. The Agency also collects visit data from ASCs in Florida on a quarterly basis. The purpose of this report is to analyze and to provide details on the Code 15 adverse incidents reported by ASCs during the fiscal year 2007-2008 (FY07-08). This report also provides patient demographic information and other characteristics of the visits and the adverse incidents identified in the ASC administrative data from the same time period.

Since 1998, the number of visits and the number of adverse events have increased 24.7 and 47.5 percent, respectively. There has been, however, relatively little change in the number of Code 15 adverse incidents reported by these facilities. The analysis of the FY07-08 ASC adverse incident data reveals that the majority of reported Code 15 injuries were related to performance of surgery on the wrong site.

Future Policy Implications:

Adverse incidents in ASCs are events that can result in costly injuries and can reflect error in the course of health care delivery. Analysis of the data may provide healthcare professionals opportunities for ASC outcomes and quality improvement.

For Information

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Introduction

Ambulatory surgery centers (ASCs) are health care facilities which offer patients the opportunity to have selected surgical and procedural services performed outside the hospital setting. ASC-qualified procedures are generally more intensive than those done in physicians' offices but not so intensive as to require a hospital stay². Examples of ASC-qualified procedures include colonoscopies and more invasive chronic pain management procedures such as injections of nerve blocks. An ambulatory surgery center (ASC) is a licensed facility that is not part of a hospital and that may also be Medicaid/Medicare certified. The primary purpose of this type of facility is to provide elective surgical care. The patient is admitted to and discharged from the facility within the same working day. Overnight stays are not permitted.

Performance of clinically appropriate surgical procedures in an outpatient setting versus an inpatient setting results in benefits to providers, patients and payers. Providers benefit from the ability to schedule procedures at a higher volume. Patients benefit by shorter recovery periods, being able to recuperate in familiar surroundings, and convenience. Payers benefit by lower cost of surgeries performed in an outpatient setting². These and other benefits may explain ASCs' significant growth in popularity over the past decade². In Fiscal Year 2008, July 1, 2007 – June 30, 2008, ASCs in Florida reported a total of 3,129,587 visits compared to 2,511,475 records from calendar year 1998, an increase of nearly twenty-five percent.

In general, ASC's are known to have a relatively lower incidence of adverse events compared to hospitals and physician offices^{4,6}. However, to assess the quality and patient safety of these facilities, the Agency for Health Care Administration's (Agency) Risk Management and Patient Safety Program identifies and tracks incidents that result in patient injury and that may reflect error in the course of the delivery of health care services. Such adverse incidents are identified by facility risk managers and reported to the Agency pursuant to section 395.0197, Florida Statutes. The patient injury incidents are reported through two different types of reports: the Annual Report and the Code 15 Report. The Annual Report reflects all adverse events that occur in the facility within a calendar year, and the Code 15 Report includes only serious patient injuries, as defined by statute and required to be reported within 15 days.

The purpose of this report is to analyze and to provide details on the Code 15 adverse incidents reported by ASCs during the fiscal year 2007-2008 (FY07-08). In addition, adverse incidents were identified in the ASC administrative data from the same time period. Descriptive summaries of both data are provided separately to provide descriptive information on incidents that occurred in the ASCs.

Legal Directions and Mandates

Adverse incidents are defined as events over which health care personnel could exercise control and that result in unplanned for medical intervention and specific injury to the patient as defined in section 395.0197, Florida Statutes. Specific injuries associated with adverse incidents include the following: death, brain or spinal damage, permanent disfigurement, fracture or dislocation of bones or joints, limitation of neurological, physical, or sensory function which continues after discharge, any condition requiring specialized medical attention other than emergency intervention occurring without patient informed consent, any condition that required the transfer of the patient, within or outside the facility, to a unit providing a more acute level of care, wrong site surgery, wrong patient surgery, performance of wrong surgical procedure, performance of procedure unrelated to the patient's diagnosis, surgical repair of injuries from a planned procedure and the unplanned removal of foreign objects. ASCs are required by law to report all adverse incidents to the Agency. Adverse Incident reports are submitted by facility risk managers via a secure encrypted electronic portal or via certified mail. Reports are confidential. Section 395.0197 (8) of the Florida Statutes directs the Agency to publish a summary and trend analysis of adverse incident reports received. The Agency publishes aggregate adverse incident reports quarterly on the risk management website: http://ahca.myflorida.com/MCHQ/Health_Facility_Regulation/Risk/index.shtml. Annual report summary data is also available via the site.

Methodology

Code 15 Data Collection and Analysis

ASCs in Florida are required to provide an Annual Report that reflects all malpractice claims information and all adverse incidents, according to statutory definition, which occur in the facility in the course of a calendar year. Code 15 incidents are a specific subset of adverse incidents that must be reported within 15 days of occurrence. They include the following: wrong site surgery, wrong patient surgery, wrong surgical procedure, patient death, brain or spinal damage to a patient, and removal of unplanned foreign objects remaining from a surgical procedure. The 15-day adverse incidents must be reported regardless of whether they occurred as a result of care/treatment received in the reporting facility or arose from health care prior to admission to the reporting facility. Both the Annual Report and Code 15 reports provide information on procedures performed during the incidents and the resulting injuries. However, the Code 15 reports are narrative as the risk managers at each reporting facility provide a detailed analysis and statement of corrective action regarding each incident.

Upon receipt of a Code 15 report, Risk Management and Patient Safety staff review the report for accuracy. There were eighty-six Code 15 reports submitted to the Agency during fiscal year 2008 from ASCs. These reports were analyzed using qualitative analysis and coded for themes. The themes were based on commonalities in the narrative reports from each facility regarding contributing factors to each adverse incident. A detailed description of each theme is provided in the Code 15 Data under the Results section.

Ambulatory Visit Data Collection and Analysis

In addition to Risk Management and Patient Safety Code 15 reporting and annual Adverse Incident reports from facilities, the Agency collects visit data from ASCs in Florida on a quarterly basis. These data provide information on procedure volumes and charges which is published on the FloridaHealthFinder website. ASCs can report up to ten ICD-9 diagnosis codes, five ICD-9 procedure codes and three external injury codes (E-codes) for each outpatient visit.

The adverse incidents following a procedure were identified in the visit data by the presence of an ICD-9 injury code as well as an E-code identifying a misadventure or adverse incident. The ICD-9 diagnosis codes used to identify patient injuries are detailed in Appendix A. The *ICD-9-CM Official Guidelines for Coding and Reporting* states that if misadventures or later complications to a procedure are identified by the provider, E-codes in the range of E870-879 should be assigned to the record. The methodology identifies the group of records in which adverse incidents are most likely to have occurred. However, the identification of these cases does not indicate whether or not the attending health care personnel could have exercised control over the incident as is the case with Code 15 data.

The ICD-9 diagnosis codes for patient injuries were grouped into thirty-five categories. The diagnosis codes within 800 and 999.9 were grouped into thirteen categories using the Barell Injury Diagnosis Matrix from the Centers for Disease Control and Prevention (CDC) as shown in Appendix B. The additional twenty-two groups are injuries identified using codes from other sections of the ICD-9 Official Guidelines, as shown in Appendix A. These additional injury codes are included in the reporting instructions for the Code 15 reports as well as the Annual Adverse Incident reports.

Due to the difference in collection methods for the Code 15 data and the Ambulatory visit data, there is no common unique identifier between the two datasets. As a result, adverse incidents reported to the Risk Management and Patient Safety Program cannot be identified in the administrative data. Therefore, the findings of the two analyses are provided separately.

Results

Annual Report Totals by Year

The 2008 ambulatory surgical center outpatient data indicated a total of 3,133,026 visits, an increase of approximately twenty-five percent from 1998. The numbers of adverse incidents submitted for the Annual Report have also increased since 1998. However, there is no clear pattern observed in reporting of Code 15 adverse incidents over time. Table 1 displays the number of annual ASC visits based on the administrative data for years 1998 through 2008, the Code 15 adverse events, and other adverse events reported to the Agency by the facilities.

Table 1. Number of Annual Visits versus Reported Events 1998-2008

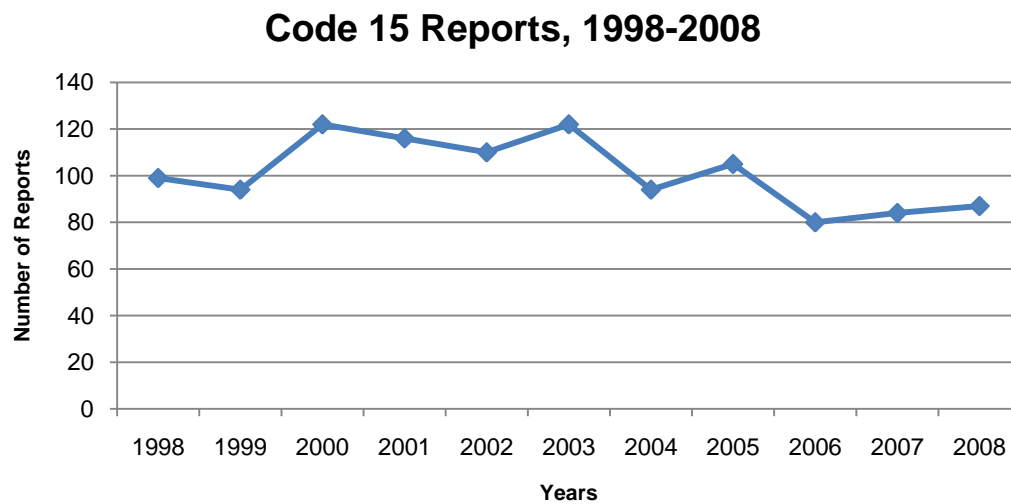
Year	Code 15 Reports	Annual Report Adverse Incidents	ASC Visits	Adverse Incidents reported per 10,000 ASC visits
1998	99	518	2,511,475	2.06
1999	94	509	2,493,069	2.04
2000	122	790	2,676,507	2.95
2001	116	724	2,786,596	2.59
2002	110	817	2,968,125	2.75
2003	122	1037	2,674,556	3.88
2004	94	957	2,749,143	3.48
2005	105	1124	2,810,524	3.99
2006	80	1162	2,953,661	3.93
2007	84	964	3,099,023	3.11
2008	87	764	3,133,026	2.44

Source: AHCA Ambulatory Surgery Center Data, Floridahealthfinder.gov; AHCA Code 15 and Annual Report Data, Ahca.myflorida.com.

Code 15 Data, Fiscal Year 07-08

Since 1998, there has been relatively little change in the number of Code 15 reports received by the Agency from ASCs which range from a low of eighty reported events in 2006 to a high of 122 reported events in 2000 and 2003.

Figure 1. Annual Number of Code 15 Reports, 1998-2008



Source: AHCA Code 15 Data; Ahca.myflorida.com.

During the Fiscal Year 07-08, there were 86 adverse incidents reported by ASCs that met the Code 15 Adverse Incident reporting guidelines as outlined on the Risk Management and Patient Safety website. The incidents are summarized in Table 2 below.

Table 2. FY07-08 Summary of Code 15 Incidents

Injury Type	Frequency	Percentage
Surgical procedure performed on the Wrong Site	19	22%
Surgical Repair of Injuries or Damage resulting from a planned Procedure	18	21%
Death	16	19%
Surgery to Remove Foreign Objects	9	11%
Surgery Unrelated to Patient Diagnosis	8	9%
Wrong Surgical Procedure Performed	8	9%
Brain Damage	6	7%
Spinal Damage	1	1%
Surgery performed on the Wrong Patient	1	1%
Total:	86	100%

Source: AHCA FY-07-08 Code 15 Data.

The majority of incidents were a surgical procedure being performed on the wrong site (22%). The second largest percentage of Code 15 incidents reported were surgical repair of injuries or damage from a planned procedure (21%). Sixteen Code 15 adverse incidents resulting in deaths were the third largest category at nineteen percent.

Table 3. FY07-08 Code 15 Procedures

Type of Procedure	Frequency	Percentage
Operations in the Digestive System	23	26.74%
Operations in the Musculoskeletal System	21	24.42%
Operations in the Eye	12	13.95%
Operations in the Nervous System	7	8.14%
Operations in the Integumentary System	5	5.81%
Diagnostic and Therapeutic Procedures	5	5.81%
Operations in the Nose, Mouth and Pharynx	3	3.49%
Operations in the Urinary System	3	3.49%
Operations in the Female Genital Organs	3	3.49%
Operations in the Male Genital Organs	2	2.33%
Operations in the Hemic and Lymphatic Systems	1	1.16%
Obstetrical Procedures	1	1.16%
Total	86	100.00%

Source: AHCA FY-07-08 Code 15 Data.

Table 3 provides a summary of the types of procedures noted on the Code 15 reports. The majority of reported Code 15 incidents involved patients who were having procedures related to the digestive system (26.7%). Digestive systems procedures include procedures such as colonoscopies. The next largest procedure category related to the musculoskeletal system (24.4%). Musculoskeletal systems procedures included surgeries such as those to repair tendons. The third largest procedure category related to operations in the eye (13.9%). Operations in the eye generally related to surgeries such as those to the eyelids and ocular lens implants.

Patient Characteristics

Patients' ages ranged from 11 to 103 for reported incidents with the average age being 58.2 years. The largest age group represented in the Code 15 reports data included patients ages 70 and above (31.4%). There were 50 females and 36 males. Information regarding patients' ethnicity was not provided in the reports.

Table 4. FY07-08 Code 15 Patient Age Ranges

Age Group	Frequency	Percentage
Ages <20	4	5%
Ages 20-29	3	4%
Ages 30-39	8	9%
Ages 40-49	16	19%
Ages 50-59	13	15%
Ages 60-69	15	17%
Ages 70+	27	31%
Total	86	100%

Source: AHCA FY-07-08 Code 15 Data.

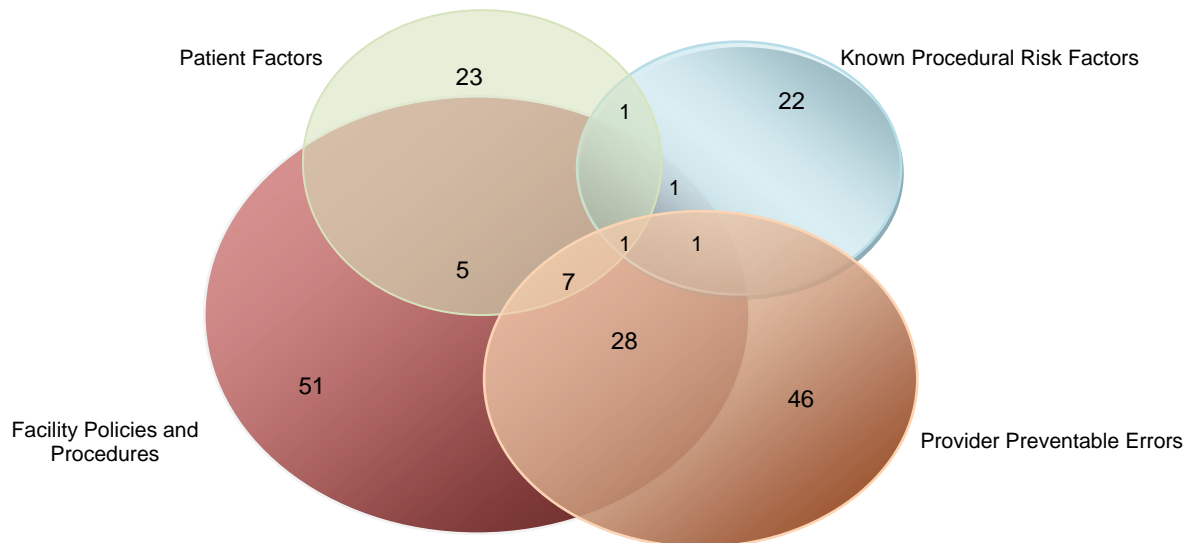
Definition of Factors

The types of incidents reported were initially placed into five primary categories based on specific factors which include: Patient Factors, Provider Preventable Errors, Known Procedural Risk Factors, Defective Instruments, and Facility Policies and Procedures.

- *Patient Factors* consist of the factors that are related to the patient such as pre-existing health conditions, age, or other organic factors.
- *Provider Preventable Errors* includes the factors that are related to the provider such as poor pre-operative assessments and failure to follow policies and procedures.
- *Facility Policies and Procedures* refer to factors such as failure to have clear effective policies and procedures and a lack of enforcement of established policies and procedures such as operating on high-risk patients in the outpatient setting.
- *Known Procedural Risk Factors* include factors such as risks that are commonly known to occur with certain procedures for which the patient has acknowledged informed consent.
- *Defective Instruments* is comprised of factors such as manufacturer defective instruments and materials, broken instruments, and malfunctioning equipment. Defective Instruments was rolled into the Facility Policies and Procedures category due to the small number of incidents that were attributed to this factor.

Figure 2 depicts a count of the interactions of the various factors. The majority of the reportable incidents were placed into two categories: provider preventable errors (46) and facility policies and procedures (51). Common in most of the reports that were placed in these two categories were issues related to the “Golden Moment” (surgical time-out and verification) process or staff failure to follow appropriate procedures and protocol. The Golden Moment or surgical time-out is a process when providers conduct a final verification prior to the procedure to confirm the person, surgery and surgical site are accurate⁵. This process is part of Joint Commission on the Accreditation of Healthcare Organizations’ (JCAHO) Universal Protocol developed in an effort to prevent wrong site, wrong person and wrong procedure Adverse Incidents. The Golden Moment issues in the data included activities such as operating on the wrong site, administration of anesthesia to an unverified site, and unverified ocular implants. The reports that were placed into the known procedural risk factors category (22) are related to injuries that resulted from a known complication of various procedures such as colonoscopies.

Figure 2. Interactions of Factors, FY07-08



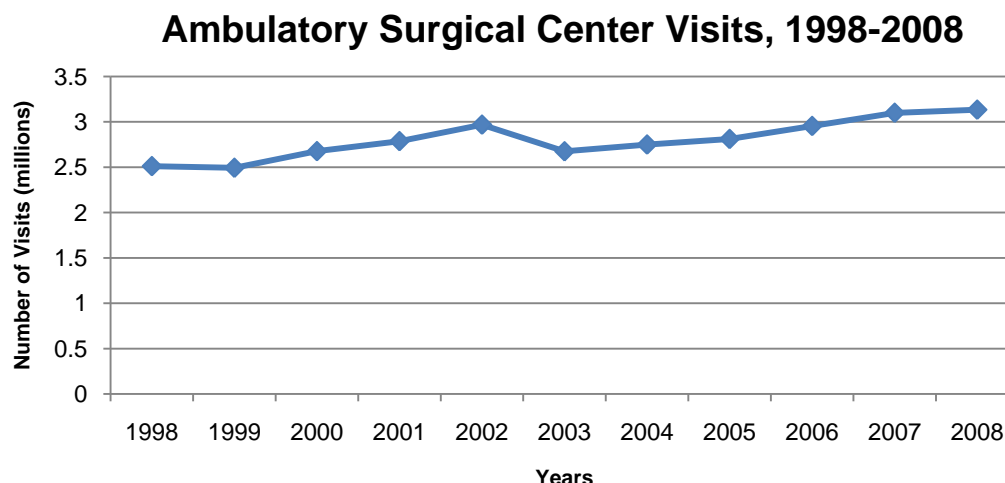
Source: AHCA FY-07-08 Code 15 Data.

The majority of the reported deaths involved multiple factors. These factors included patient age, pre-existing health conditions and known risks of certain procedures. The majority of the patient deaths occurred in patients ages 77 and over. Many of the patients had pre-existing health conditions that placed them at increased risk for surgery related complications.

Adverse Incidents Identified in Ambulatory Surgery Centers Administrative Data, Fiscal Year 07-08

ASCs have experienced increasing number of visits since 1998 (Figure 3). In 2008, the Agency collected a total of 3,133,026 records from ASCs, an increase of approximately twenty-five percent compared to the 2,511,475 visits from a decade ago.

Figure 3. Number of Annual ASC Visits, 1998-2008



Source: AHCA Ambulatory Surgery Center Data; FloridaHealthFinder.gov.

In the FY07-08 ASC outpatient data, there were a total of 3,129,587 records, of which 35,680 were identified as meeting the criteria for an adverse incident following a procedure. The patients with the highest number of ASC visits were white women of age over 70, nearly fourteen percent of all outpatient visits. However, the group of patients with the highest percentage of adverse events were males, black and of the age group 40-49. Details of the visits by age, gender and race are provided in Tables 5, 6 and 7, respectively. In addition, Table 8 shows the ten counties with the highest percentage of the identified adverse events.

Table 5. FY07-08 Ambulatory Surgery Center Outpatient Visits by Age and Identified Adverse Events

Age	Identified Adverse Event		Total Visits
Ages <20	1,524	0.86%	177,642
Ages 20-29	1,429	0.91%	156,864
Ages 30-39	2,696	1.18%	228,924
Ages 40-49	5,022	1.31%	383,455
Ages 50-59	6,854	1.18%	581,004
Ages 60-69	7,749	1.19%	649,579
Ages 70+	10,406	1.09%	952,119
Total	35,680	1.14%	3,129,587

Source: AHCA FY-07-08 Ambulatory Surgery Center Data

Table 6. FY07-08 Ambulatory Surgery Center Outpatient Visits by Gender and Identified Adverse Events

Gender	Identified Adverse Event		Total Visits
Male	16,695	1.23%	1,351,831
Female	18,985	1.07%	1,777,756
Total	35,680	1.14%	3,129,587

Source: AHCA FY-07-08 Ambulatory Surgery Center Data

Table 7. FY07-08 Ambulatory Surgery Center Outpatient Visits by Race and Identified Adverse Events

Race	Identified Adverse Event		Total Visits
Black	5,948	2.18%	272,714
White	25,104	1.06%	2,361,438
Other	1,617	1.11%	169,847
Hispanic	3,011	0.92%	325,588
Total	35,680	1.14%	3,129,587

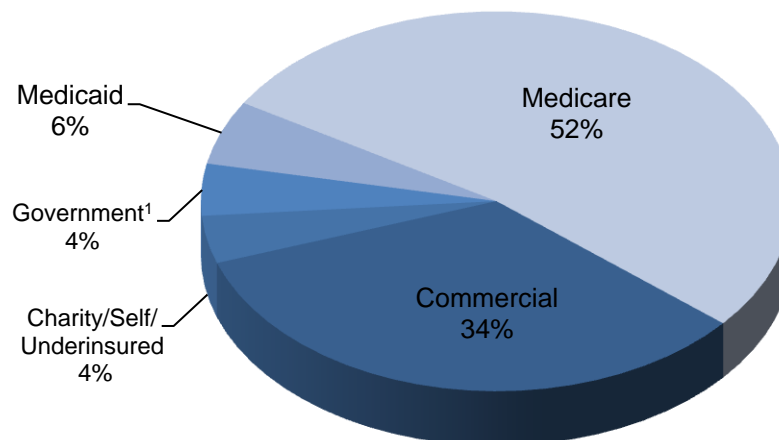
Source: AHCA FY-07-08 Ambulatory Surgery Center Data

Table 8. FY07-08 Top Ten Counties with the Highest Rate of Identified Adverse Events from ASC Visits

County	Identified Adverse Event		Total Visits
Alachua	1,878	2.99%	62,886
Charlotte	780	2.19%	35,630
Martin	590	1.68%	35,131
Duval	3,140	1.66%	188,707
Hillsborough	4,012	1.65%	243,500
Escambia	1,406	1.61%	87,147
Pinellas	2,724	1.44%	189,004
Citrus	351	1.36%	25,741
Seminole	196	1.34%	14,612
Okaloosa	388	1.31%	29,680
Other counties	20,215	0.91%	2,217,549
Total	35,680	1.14%	3,129,587

Source: AHCA FY-07-08 Ambulatory Surgery Center Data

As shown in Figure 4, the primary source of reimbursement for over half of the adverse incidents identified in the data was Medicare, followed by a commercial payer type.

Figure 4. Identified Adverse Incidents Payer Type, FY07-08

¹ Workers' Compensation, CHAMPUS, Veteran's Affairs, Kidcare and Other State or Local Government.

The top principal procedures performed among ASC visits were operations of the digestive system, the integumentary system, the musculoskeletal system, and operations in the eye. However, the procedures that had the highest percentages of adverse incidents were operations of the cardiovascular system, procedures not elsewhere classified and operations of the integumentary system respectively (Table 9).

Table 9. Principal Procedure Groups of the Identified Adverse Events

Principal Procedure Group	Visits with Adverse Event	Percentage	Total Visits
Operations in the Cardiovascular System	8,272	8.50%	97,314
Procedures and Interventions, not elsewhere classified ²	328	5.24%	6,261
Operations in the Integumentary System	10,568	4.77%	221,773
Diagnostic and Therapeutic Procedures	3,934	2.75%	143,256
Operations in the Musculoskeletal System	4,305	1.98%	217,133
Operations in the Respiratory System	636	1.78%	35,687
Operations in the Urinary System	1,066	1.52%	70,016
Operations in the Ear	403	1.40%	28,724
Operations in the Male Genital Organs	417	1.22%	34,282
Operations in the Female Genital Organs	749	0.87%	86,400
Operations in the Hemic and Lymphatic Systems	110	0.85%	12,934
Operations in the Eye	1,178	0.63%	188,302
Operations in the Nose, Mouth and Pharynx	394	0.59%	66,987
Operations in the Digestive System	2,724	0.42%	651,890
Operations in the Nervous System	561	0.30%	186,002
Operations in the Endocrine System	35	0.25%	13,981
Obstetrical Procedures	0	0.00%	23,245
Total	35,680	100.00%	2,084,187

Source: AHCA FY-07-08 Ambulatory Surgery Center Data

Summary and Conclusions

There were over 3 million records contained in the Ambulatory Surgery Center dataset. Following a query of the dataset using the inclusion guidelines for adverse incidents, it was determined that just over 35,000 records contained E-codes that were consistent with adverse incident reporting parameters. This is in marked contrast to the 964 annual

² These are procedures grouped to accommodate space limitations in the existing hierarchical classification system or if they do not fall under any of the existing body system. Procedures in this group may also identify new technology. This group contains an assorted number of procedures and interventions that affect all body systems, ranging from revision of hip replacement to intravascular imaging of blood vessels.

adverse incidents and Code 15 reports received by the Agency for FY2007-08. Reportable Code 15 adverse incidents are defined as adverse events over which health care personnel could exercise control. This criterion cannot be identified using administrative data. The vast differences in definition and collection methodology between the ASC visit data and the adverse incidents reported explain some of the differences in the three sets of data. However, it is important to note that without medical record review, it is virtually impossible to determine the true nature of the 35,000 plus records contained in the outpatient visit data that met inclusion criteria based on the ICD-9 injury codes and E-codes.

Other research on Ambulatory Surgery Center outcomes and quality can be accessed at www.floridahealthfinder.gov/researchers/studies-presentations.shtml. The Florida State University's College of Medicine has published a study that explores associations between adverse patient outcomes (those resulting in hospitalization or death), and healthcare provider volumes of outpatient colonoscopy, cataract removal, and upper gastrointestinal endoscopy performed in outpatient surgical settings in Florida. The findings of the study indicate a relationship between healthcare provider volume and adverse patient outcomes, indicating high-volume facilities and high-volume surgeons had lower rates of adverse patient outcomes than that of lower volume providers.

Appendix A

Use the code that best describes the resulting injury to the patient. Injury codes are confined to the digits 800-999.9 of the ICD-9-CM with the following exceptions:

348.1	Anoxic brain damage
415.1	Pulmonary embolism and infarction
415.2	Latrogenic pulmonary embolism and infarction
415.3	Cardiac arrest
451-451.9	Phlebitis and thrombophlebitis
630-677	Coding for complications of pregnancy, childbirth, & the puerperium
656.3	Fetal distress
656.4	Intrauterine death
665.1	Rupture of uterus during and after labor
666	Postpartum hemorrhage
668	Complications of the administration of anesthetic or other sedation in labor and delivery
669.4	Other complications of obstetrical surgery and procedures
707	Decubitus
729.9	Compartmental syndrome
767	Birth trauma
768	Intrauterine hypoxia and birth asphyxia
772	Fetal and neonatal hemorrhage
779.2	Cerebral depression, coma and other abnormal cerebral signs
779.9	Unspecified condition originating in the perinatal period
798	Sudden death, cause unknown
799.1	Respiratory arrest

Appendix B

The Barell Injury Diagnosis Matrix. Classification by Body Injury and Nature of Injury

		ICD-9-CM codes	FRACTURE	DISLOCATION	SPRAINS & STRAINS	INTERNAL	OPEN WOUND	AMPUTATIONS	BLOOD VESSELS	CONTUSION / SUPERFICIAL	CRUSH	BURNS	NERVES	UNSPECIFIED	
			800-829	830-839	840-848	850-854,860-869	870-884, 890-894	885-887, 895-897	900-904	910-924	925-929	940-949	950-951 953-957	959	
H	Traumatic Brain Injury	1 Type 1 TBI	800,801,803,804(1-4, 6-9), (03-05,53-55) 850(2-4), 851-854, 950(1-3), 995.55	800,801,803,804(1-4, 6-9) 800,801,803,804(03-05,53-55)	/	/	850(2-4) 851-854*, 995.55	/	/	/	/	/	950.1-3	/	
		2 Type 2 TBI	800,801,803,804(00,02,06,09) (50,52,56,59) , 850(0,1,5,9)	800,801,803,804(00,02,06,09), 800,801,803,804(50,52,56,59)	/	/	850(0,1,5,9)	/	/	/	/	/			
		3 Type 3 TBI	800,801,803,804(01, 51)	800,801,803,804(01, 51)	/	/	/	/	/	/	/	/	/	/	
	Other head, face and neck	4 Other Head	873(0-1, 8-9), 941.x6, 951, 959.01	/	/	/	/	873.0-1,8-9	/	/	/	/	941.x6	951	959.01*
		5 Face	802, 830, 848.0-1, 872, 873.2-7, 941(x1,x3-x5,x7)	802	830	848.0-1	/	872, 873.2-7	/	/	/	/	941.x1,x3-x5,x7	/	/
		6 Eye	870-871, 918, 921, 940, 941.x2, 950(0,9)	/	/	/	/	870-871	/	/	918, 921	/	940, 941.x2	950(0,9)	/
		7 Neck	807.5-6, 848.2, 874, 925.2, 941.x8, 953.0, 954.0	807.5-6	/	848.2	/	874	/	/	/	925.2	941.x8	953.0, 954.0	/
		8 Head, Face and Neck Unspecified	900, 910, 920, 925.1, 941.x0, .x9, 947.0, 957.0, 959.09	/	/	/	/	/	/	900	910, 920	925.1	941.x0,x9, 947.0	957.0	959.09
	Spinal Cord SCI	9 Cervical SCI	806(0-1), 952.0	806.0-1	/	/	952.0	/	/	/	/	/	/	/	/
		10 Thoracic/Dorsal SCI	806(2-3), 952.1	806.2-3	/	/	952.1	/	/	/	/	/	/	/	/
		11 Lumbar SCI	806(4-5), 952.2	806.4-5	/	/	952.2	/	/	/	/	/	/	/	/
		12 Sacrum Coccyx SCI	806(6-7), 952(3-4)	806.6-7	/	/	952.3-4	/	/	/	/	/	/	/	/
		13 Spine+ Back unspecified SCI	806(8-9), 952(8-9)	806.8-9	/	/	952.8-9	/	/	/	/	/	/	/	/
	Vertebral Column VCI	14 Cervical VCI	805(0-1), 839(0-1), 847.0	805.0-1	839.0-1	847.0	/	/	/	/	/	/	/	/	/
		15 Thoracic /Dorsal VCI	805(2-3), 839(21, 31), 847.1	805.2-3	839.21, 31	847.1	/	/	/	/	/	/	/	/	/
		16 Lumbar VCI	805(4-5), 839(20, 30), 847.2	805.4-5	839.20, 30	847.2	/	/	/	/	/	/	/	/	/
		17 Sacrum Coccyx VCI	805(6-7), 839(41-42), 839(51-52), 847.3-4	805.6-7	839(41-42, 51-52)	847.3-4	/	/	/	/	/	/	/	/	/
		18 Spine+ Back unspecified VCI	805(8-9), 839(40, 49), 839(50, 59)	805.8-9	839(40, 49, 50, 59)	/	/	/	/	/	/	/	/	/	/
	Torso	19 Chest (Thorax)	807(0-4), 839(61, 71), 848(3-4), 860-862, 875, 879(0-1), 901, 922(0-1, 33), 926.19, 942.x1-.x2 953.1	807.0-4	839.61, 71	848.3-4	860-862	875, 879.0-1	/	901	922(0,1, 33)	926.19	942.x1-x2	953.1	/
		20 Abdomen	863-866, 868, 879(2-5), 902(0-4), 922.2,942.x3, 947.3, 953(2,5)	/	/	/	863-866, 868	879.2-5	/	902.0-4	922.2	/	942.x3, 947.3	953.2, 953.5	/
		21 Pelvis & Urogenital	808, 839(69,79), 846, 848.5, 867,877-878 902(5,81-82), 922.4, 926(0,12), 942.x5,947.4, 953.3	808	839.69, 79	846, 848.5	867	877-878	/	902(5, .81- 82)	922.4	926(0, 12)	942.x5, 947.4	953.3	/
		22 Trunk	809, 879(6-7), 911, 922(8-9), 926(8-9), 942(x0,x9), 954(1,8-9), 959.1	809	/	/	/	879.6-7	/	/	911, 922.8-9	926.8-9	942.x0, 942.x9	954.1, .8-9	959.1
		23 Back and Buttock	847.9, 876, 922(31-32), 926.11, 942.x4	/	/	847.9	/	876	/	/	922.31-32	926.11	942.x4	/	/
		24 Shoulder & upper arm	810-812, 831, 840, 880, 887(2-3), 912,923.0, 927.0, 943(x3-x6), 959.2	810-812	831	840	/	880	887.2-3	/	912, 923.0	927.0	943.x3-x6	/	959.2
Extremities	Upper	25 Forearm & elbow	813, 832, 841, 881(x0-x1), 887(0-1), 923.1, 927.1, 943(x1-x2)	813	832	841	/	881.x0-x1	887.0-1	/	923.1	927.1	943.x1-x2	/	/
		26 Wrist, hand & fingers	814-817, 833-834, 842,881.x2, 882, 883, 885-886, 914-915, 923(2-3), 927(2-3), 944, 959(4-5)	814-817	833, 834	842	/	881.x2,882, 883	/	914-915, 923.2-3	927.2-3	944	/	959.4-5	
		27 Other & unspecified	818, 884, 887(4-7), 903, 913, 923(8-9), 927(8-9), 943(x0,x9), 953.4, 955, 959.3	818	/	/	/	884	887.4-7	903	913,923.8,9	927.8-9	943.x0,x9	953.4, 955	959.3
		28 Hip	820, 835, 843, 924.01, 928.01	820	835	843	/	/	/	/	924.01	928.01	/	/	/
		29 Upper leg & thigh	821, 897(2-3), 924.00, 928.00, 945.x6	821	/	/	/	897.2-3	/	924.00	928.00	945.x6	/	/	
	Lower	30 Knee	822, 836, 844.0-3, 924.11, 928.11, 945.x5	822	836	844.0-3	/	/	/	924.11	928.11	945.x5	/	/	
		31 Lower leg & ankle	823-824, 837, 845.0, 897(0-1), 924(10, 21), 928(10,21), 945(x3-x4)	823-824	837	845.0	/	897.0-1	/	924.10, 21	928.10, 21	945.x3-x4	/	/	
		32 Foot & toes	825-826, 838, 845.1, 892-893, 895-896, 917, 924(3, 20), 928(3, 20), 945(x1-x2)	825-826	838	845.1	/	892-893	895-896	/	917, 924.3, 20	928.3, 20	945.x1-x2	/	/
		33 Other & unspecified	827,844(8-9), 890-891, 894, 897(4-7), 904(0-8), 916, 924(4-5), 928(8-9), 945(x0,x9), 959.6-7	827	/	844.8,9	/	890-891,894	897.4-7	904.0-8	916, 924.4-5	928.8,9	945.x0,x9	/	959.6-7
		34 Other/ multiple	819, 828, 902(87, 89), 947(1-2), 953.8, 956	819, 828	/	/	/	/	/	902.87, 89	/	/	947.1-2	953.8, 956	/
A	System-wide & late effects	35 Unspecified late	829, 839(8-9), 848(8-9), 869, 879(8,9), 902.9, 904.9, 919, 924(8,9), 929, 946, 947(8,9), 948, 949, 953.9, 957(1,8,9), 959(8,9)	829	839.8-9	848.8-9	869	879(8-9)	/	902.9, 904.9	919, 924.8,9	929	946, 947.8,9 948, 949	953.9, 957.1, 8,9	959.8,9
		36 System-wide & late effects	905-908, 909(0,1,2,4,9), 930-939,958, 960-994, 995.50-.54, 59, 995(80-85)	Foreign body (930-939), Early complications of trauma (958), Poisoning (960-979), Toxic Effects (980-989), Other and unspecified effects of external cause (990-994) Child and adult maltreatment (995.50-.54, 59, 995.80-85) Late effects of injuries, poisonings, toxic effects and other external causes (905-909) excluding 909(3, .5)											

Source: Centers for Disease Control and Prevention

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